



HYGIENIC DOUBLE DIAPHRAGM PUMP OVERVIEW

For Low to Medium Viscosity Ingredient Transfer



PROVEN QUALITY. LEADING TECHNOLOGY.

GRACO HYGIENIC DOUBLE DIAPHRAGM PUMP OVERVIEW

Our double diaphragm pumps are designed to tackle rigorous, continuous use applications that require high flow rates and portability. The pumps are manufactured with your productivity in mind — providing you with one of the most reliable pumps in the market.

RUNS DRY

Seal-less diaphragm pump design eliminates leaking and failures due to run-dry pump conditions.

STALLS UNDER PRESSURE

Graco double diaphragm pumps stall under pressure preventing pump failures from clogged lines or closed valves.

SELF-PRIMING

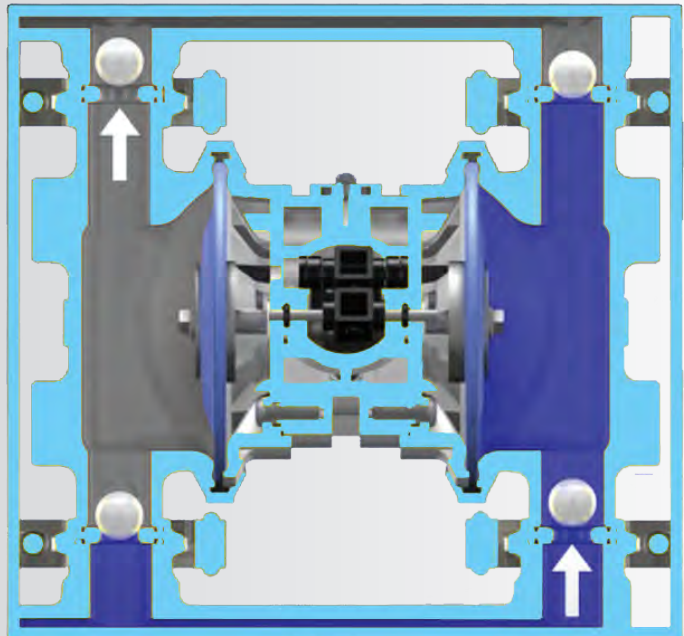
Double diaphragm pumps can pull a suction without being gravity fed or supplied by another source

TRI-CLAMP FLUID CONNECTIONS

Equipped with inlet and outlet tri-clamp connections, offering a quick knockdown design for easy cleanability and a swift maintenance process.

LOW-TO-MEDIUM VISCOSITY

Graco double diaphragm pumps can transfer material up to 25,000 cps depending on material characteristics and system configuration.



MATERIALS OF CONSTRUCTION

Diaphragm	Buna-N, EPDM Overmold, FKM (Viton), PTFE/EPDM Overmold, PTFE/Santoprene 2-Piece, Santoprene
Seat	316 Stainless Steel
Ball	Buna-N, EPDM, FKM (Viton), Polychloroprene Weighted, PTFE, Santoprene, Stainless Steel Ball/Flapper
O-Ring	Buna-N, EPDM, FKM (Viton), PTFE

*Material options may vary depending upon pump drive and size

Double diaphragm pumps are a strong choice for contaminant-free transfer of sensitive products. With no mechanical seals, they provide a lower-cost durable solution that is easier to repair and maintain compared to other commonly used technologies.

Graco double diaphragm pumps handle solids and abrasive material with ease. Transfer large particles up to 3.8 inch diameter without damage to meat, poultry, fruits and vegetables. With a durable seal-less design, these pumps handle abrasive materials better than rotary syle pumps that have rotary seals and tight tolerances.

OVERMOLDED DIAPHRAGMS

Graco's overmolded diaphragms design reduces areas that harbor bacteria.

- Improve wear and diaphragm life with no exposed diaphragm plate on the fluid side
- Longer diaphragm life in moderately abrasive applications that still require PTFE.



PUMP STANDS

Graco offers an optional 360 degree rotating stand for quick maintenance and to easily drain the pump without disassembly.

- 304 stainless steel construction
- Wash-down approved

FLUSHING & CIP

Specific models are better than others and results / cleaning time vary depending on ingredients and cleaners.

- Designed for cleanability and flushing
- Optimal manifold and fluid cover design to drain for cleaning when rotated
- Models available that can be CIP flushed per specification and ingredients



AIR-AND ELECTRIC-OPERATED DOUBLE DIAPHRAGM PUMPS

SANIFORCE® AODD PUMPS

Graco's SaniForce air-operated double diaphragm (AODD) pumps consist of as few parts as possible and a large fluid cavity, so the pump can be cleaned and maintained in minutes. The rugged construction resists corrosion for reliable performance and a lower overall cost of ownership.

DURABLE PUMP TECHNOLOGY

Handles the most difficult materials without damaging the pump and is also gentle on shear sensitive material.

LEAK DETECTOR OPTIONS

Reduce risk with a leak detector and know immediately when your product is leaking.

FLAPPER CHECK OPTIONS

Available in both ball and flapper check design. The flapper check design provides a delicate, shear-sensitive operation and gently transfers products. This low-shear operation ensures product quality is not damaged or compromised, resulting in the proper transfer of medium to large particles.

EXTERNALLY SERVICEABLE AIR VALVE

With fewer moving parts and complete external serviceability, SaniForce air valves deliver leading efficiency and reduce downtime. The lube free, non-stick design is one of most hygienic options on the market.





QUANTM™

QUANTM™ EODD PUMPS

The QUANTM electric-operated double diaphragm (EODD) pumps combine the advantages of an AODD pump like self-priming, stalling under pressure, and increased diaphragm life with the efficiency of an electric drive.



ELECTRIC DRIVE

QUANTM pumps are up to 80% more efficient than AODD pumps and also eliminate the requirement for compressed air, relieving the load on air compressors.

QUIET OPERATION

Eliminating compressed air drives a significant noise reduction, resulting in a 23% reduction in sound pressure over standard AODD pumps as well as a 90% decrease in sound intensity.

INTEGRATED CONTROL

Control the pump with the turn of a dial with intelligent automatic priming feature. The control includes FEP compliant coating, and is IP66 wash-down rated.

AUTOMATION

All QUANTM pumps are equipped with an I/O port for remote or PLC pump control to start or stop the pump and adjust speed.

SMALL FOOTPRINT & ENVELOPE

QUANTM pumps are similar in size to Graco's AODD pumps. Removal of the gearbox reduces footprint compared to other electric options.

FLUID SECTIONS WITH SURFACE FINISH FOR MOST APPLICATIONS

Graco presents a wide range of solutions for food, beverage and personal care applications. Our double diaphragm pumps are designed with your productivity in mind, offering safe and easy handling while meeting the highest standards and requirements in the industry. The SaniForce Double Diaphragm pump range exists of five different pump types, available in multiple sizes, that come in air-operated and electrically driven designs. Each pump is thoroughly tested before it leaves our factories.



BEVERAGE SERIES (BV)

Designed for high-volume beverage transfer in wineries, breweries and distilleries.

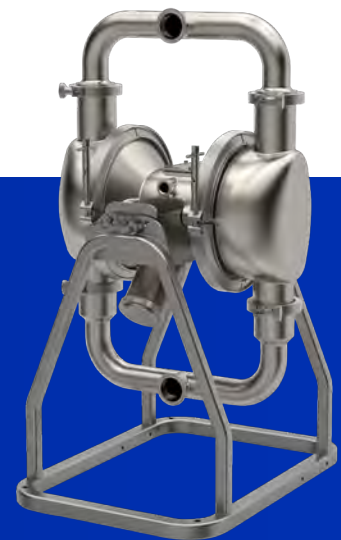
- Surface finish: 125 Ra
- Available sizes ranging from 1" up to 2"
- Air-operated
- Flow Rates: up to 150 gpm (568 lpm)



FOOD GRADE (FG)

Designed for general food and beverage transfer applications such as juices, sauces, condiments and light lotions.

- Surface finish: 125 Ra
- Available sizes ranging from 1/2" up to 2"
- Air and Electric driven options
- Flow Rates: up to 160 gpm (568 lpm)



HIGH SANITATION (HS)

Designed for high care applications such as cosmetics, shampoo and personal care products.

- Surface finish: 32 Ra
- Available sizes ranging from 1" up to 3"
- Air and Electric driven options
- Flow Rates: up to 230 gpm (870 lpm)



3A APPROVED (3A)

Designed for 3A applications such as dairy, yogurt and cottage cheese.

- Surface finish: 32 Ra
- Available sizes ranging from 1" up to 3"
- Air and Electric driven options
- Flow Rates: up to 230 gpm (870 lpm)



LARGE PARTICLE (LP)

Designed for large particle transfer such as boiled eggs, meats and poultry applications.

- Surface finish: 32 Ra
- Available sizes ranging from 1 1/2" up to 4"
- Air and Electric driven options
- Flow Rates: up to 130 gpm (492 lpm)



PHARMACEUTICAL (PH)

Designed for ultra-high care and bio pharmaceutical applications such as medical creams and solvent transfer.

- Surface finish: 20 Ra
- Available sizes ranging from 1" up to 3"
- Air and Electric driven options
- Flow Rates: up to 230 gpm (870 lpm)

BEVERAGE PUMPS

SAFE, COST EFFECTIVE SOLUTION FOR YOUR BEVERAGE TRANSFER NEEDS

PUMP FINISH

- Cast 316 SST
- 125 Ra finish
- Bolted fluid section
- Sanitary fluid connections

SaniForce Beverage (BV) series pumps are ruggedly constructed for high-volume beverage transfer. The bolt-through fluid sections and tri-clamp fluid connections with FDA compliant elastomers deliver a safe, cost effective solution for wineries, breweries, distilleries and general beverage transfer.



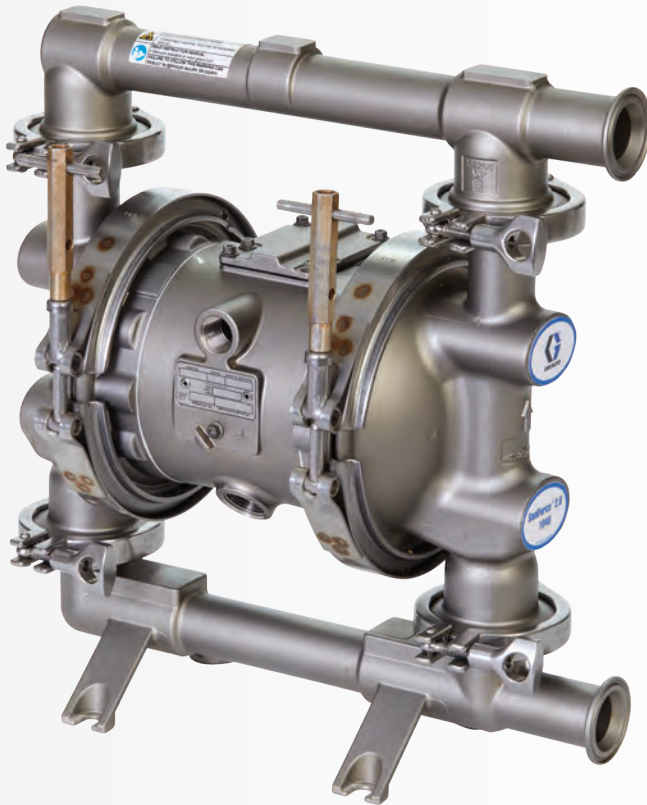
AIR-OPERATED	SaniForce 1040 BV	SaniForce 1590 BV	SaniForce 2150 BV
Max. flow rate	41 gpm (155 lpm)	100 gpm (379 lpm)	150 gpm (568 lpm)
Max. fluid pressure	120 psi (8 bar, 0.8 MPa)	120 psi (8 bar, 0.8 MPa)	120 psi (8 bar, 0.8 MPa)
Fluid passage size	1 in. (25.4 mm)	1.5 in. (38 mm)	2 in. (51 mm)
Max. pumpable solids	1/8 in. (3.2 mm)	3/16 in. (4.8 mm)	1/4 in. (6.3 mm)

FOOD GRADE PUMPS

INCREASE DURABILITY AND REDUCE REPAIR TIME WITH FEWER MOVING PARTS

PUMP FINISH

- Cast 316 SST
- FDA compliant
- 125 Ra finish



AIR-OPERATED	SaniForce 515 FG	SaniForce 1040 FG	SaniForce 1590 FG	SaniForce 2150 FG
Max. flow rate	16 gpm (61 lpm)	41 gpm (151 lpm)	100 gpm (379 lpm)	160 gpm (605 lpm)
Max. fluid pressure	100 psi (7 bar 0.7 MPa)	120 psi (8 bar, 0.8 MPa)	120 psi (8 bar, 0.8 MPa)	120 psi (8 bar, 0.8 MPa)
Fluid passage size	0.5 in. (12.7 mm)	1 in. (25.4 mm)	1.5 in. (38 mm)	2 in. (51 mm)
Max. pumpable solids	3/32 in. (2.4 mm)	1/8 in. (3.2 mm)	3/16 in. (4.8 mm)	1/4 in. (6.3 mm)

ELECTRIC	QUANTM h30 FG	QUANTM h80 FG	QUANTM h120 FG
Max. flow rate	30 gpm (114 lpm)	80 gpm (300 lpm)	120 gpm (454 lpm)
Max. fluid pressure	100 psi (7 bar 0.7 MPa)	120 psi (8 bar, 0.8 MPa)	60 psi (4 bar, 0.4 MPa)
Fluid passage size	1 in. (25.4 mm)	1.5 in. (38 mm)	2 in. (51 mm)
Max. pumpable solids	1/8 in. (3.2 mm)	3/16 in. (4.8 mm)	1/4 in. (6.3 mm)

HIGH SANITATION PUMPS

EASY TO CLEAN AND SANITIZE PUMP FOR HIGH CARE APPLICATIONS

PUMP FINISH

- 316 L SST
- 32 Ra finish



AIR-OPERATED	SaniForce 1040 HS	SaniForce 1590 HS	SaniForce 2150 HS	SaniForce 3250 HS
Max. flow rate	41 gpm (151 lpm)	105 gpm (398 lpm)	180 gpm (681 lpm)	230 gpm (870 lpm)
Max. fluid pressure	120 psi (8 bar, 0.8 MPa)	120 psi (8 bar, 0.8 MPa)	120 psi (8 bar, 0.8 MPa)	100 psi (7 bar, 0.7 MPa)
Fluid passage size	1 in. (25.4 mm)	1.5 in. (38 mm)	2 in. (51 mm)	3 in. (76.2 mm)
Max. pumpable solids	0.42 in. (10.7 mm)	0.5 in. (12.7 mm)	0.5 in. (12.7 mm)	3/4 in. (19 mm)

ELECTRIC	QUANTM h30 HS	QUANTM h80 HS	QUANTM h120 HS
Max. flow rate	30 gpm (114 lpm)	80 gpm (300 lpm)	120 gpm (454 lpm)
Max. fluid pressure	100 psi (7 bar, 0.7 MPa)	120 psi (8 bar, 0.8 MPa)	60 psi (4 bar, 0.4 MPa)
Fluid passage size	1 in. (25.4 mm)	1.5 in. (38 mm)	2 in. (51 mm)
Max. pumpable solids	0.42 in. (10.7 mm)	0.5 in. (12.7 mm)	0.5 in. (12.7 mm)



3A PUMPS

3A CERTIFIED DIAPHRAGM PUMP FOR HANDLING DAIRY SAFELY AND EFFECTIVELY

PUMP FINISH

- 316 L SST
- 32 Ra finish



AIR-OPERATED	SaniForce 1590 3A	SaniForce 2150 3A	SaniForce 3250 3A
Max. flow rate	105 gpm (398 lpm)	180 gpm (681 lpm)	230 gpm (870 lpm)
Max. fluid pressure	120 psi (8 bar, 0.8 MPa)	120 psi (8 bar, 0.8 MPa)	100 psi (7 bar 0.7 MPa)
Fluid passage size	1.5 in. (38 mm)	2 in. (51 mm)	3 in. (76.2 mm)
Max. pumpable solids	0.5 in. (12.7 mm)	0.5 in. (12.7 mm)	3/4 in. (19 mm)

ELECTRIC	QUANTM h80 3A	QUANTM h120 3A
Max. flow rate	80 gpm (300 lpm)	120 gpm (454 lpm)
Max. fluid pressure	120 psi (8 bar, 0.8 MPa)	60 psi (4 bar, 0.4 MPa)
Fluid passage size	1.5 in. (38 mm)	2 in. (51 mm)
Max. pumpable solids	0.5 in. (12.7 mm)	0.5 in. (12.7 mm)

PHARMACEUTICAL PUMPS

PHARMACEUTICAL GRADE DIAPHRAGM PUMP

PUMP FINISH

- 316 L SST
- 20 Ra finish



AIR-OPERATED	SaniForce 1040 PH	SaniForce 1590 PH	SaniForce 2150 PH	SaniForce 3250 PH
Max. flow rate	41 gpm (155 lpm)	105 gpm (398 lpm)	180 gpm (681 lpm)	230 gpm (870 lpm)
Max. fluid pressure	120 psi (8 bar, 0.8 MPa)	120 psi (8 bar, 0.8 MPa)	120 psi (8 bar, 0.8 MPa)	100 psi (7 bar, 0.7 MPa)
Fluid passage size	1 in. (25.4 mm)	1.5 in. (38 mm)	2 in. (51 mm)	3 in. (76.2 mm)
Max. pumpable solids	0.42 in. (11 mm)	0.5 in. (12.7 mm)	0.5 in. (12.7 mm)	3/4 in. (19 mm)

ELECTRIC	QUANTM h30 PH	QUANTM h80 PH	QUANTM h120 PH
Max. flow rate	30 gpm (114 lpm)	80 gpm (300 lpm)	120 gpm (454 lpm)
Max. fluid pressure	100 psi (7 bar, 0.7 MPa)	120 psi (8 bar, 0.8 MPa)	60 psi (4 bar, 0.4 MPa)
Fluid passage size	1 in. (25.4 mm)	1.5 in. (38 mm)	2 in. (51 mm)
Max. pumpable solids	0.42 in. (10.7 mm)	0.5 in. (12.7 mm)	0.5 in. (12.7 mm)

LARGE PARTICLE PUMPS

BUILT TO HANDLE SOLIDS UP TO 3.8 INCHES IN DIAMETER

PUMP FINISH

- 316 L SST
- 32 Ra finish



AIR-OPERATED	SaniForce 1590 LP	SaniForce 3150 LP	SaniForce 4150 LP
Max. flow rate	105 gpm (398 lpm)	130 gpm (492 lpm)	90 gpm (340 lpm)
Max. fluid pressure	120 psi (8 bar, 0.8 MPa)	120 psi (8 bar, 0.8 MPa)	120 psi (8 bar, 0.8 MPa)
Fluid passage size	1.5 in. (38 mm)	3 in. (76.2 mm)	4 in. (101.6 mm)
Max. pumpable solids	1.2 in. (30.5 mm)	2.5 in. (63 mm)	3.8 in. (96.5 mm)

ELECTRIC	QUANTM h80 2-in. LP	QUANTM h120 3-in. LP
Max. flow rate	90 gpm (300 lpm)	105 gpm (397 lpm)
Max. fluid pressure	100 psi (7 bar, 0.7 MPa)	60 psi (4 bar, 0.4 MPa)
Fluid passage size	1.5 in. (38 mm)	3 in. (76.2 mm)
Max. pumpable solids	1.2 in. (30.5 mm)	2.46 in. (62.5 mm)

APPLICATION OVERVIEW

FOOD

Salad dressings, condiments, sauces, juices and flavored drinks, edible oils, snack food flavorings, beer, wine and more



DAIRY

Yogurt, cottage cheese, ice cream ingredients



MEAT & POULTRY

Eggs, poultry viscera, fish products, chicken nuggets, blood slurry/sludge



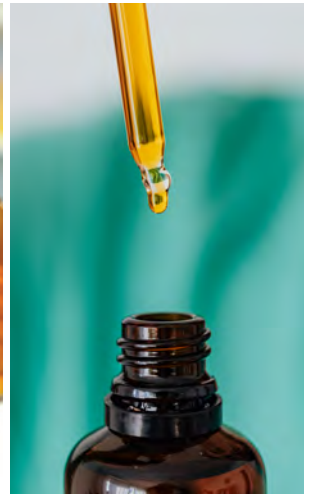
PERSONAL CARE

Cosmetics, facial scrubs, lotions, creams, toothpaste, deoderant base, petroleum jelly, lip gloss



PHARMA

Medical creams & lotions, blood products, bio pharmaceuticals, alcohol, vaccines, plasma





OUR BRAND PROMISE TO YOU

Since 1926, **innovation**, **quality** and **A+ Service** have been at the center of Graco.

Experience Innovation

Our focus on innovation results in products and equipment that lead the industry with technologically-advanced features, pioneering design, high performance and unparalleled reliability. In short, innovation is how you get better products!

Building Quality

You're investing in high-quality products built to last for years of reliable service. Moreover, we partner with our customers to better understand how you're deploying our products in the field, then use your experiences to improve performance and durability.



A+ service, every time

You'll see A+ Service in action when you contact any of our support services options no matter where you are in the world. We'll listen to your situation and work methodically to resolve it as quickly as we can. We are guided by a mindset of integrity and a customer service view centered on collaboration and relationships, not transactions.

For more information visit graco.com/contact